University of British Columbia, Vancouver
Department of Computer Science

CPSC 304 Project Cover Page

Milestone #: 1

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Group Number: 5

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By typing our names and student numbers in the above table, we certify that the work in the attached assignment was performed solely by those whose names and student IDs are included above. (In the case of Project Milestone 0, the main purpose of this page is for you to let us know your e-mail address, and then let us assign you to a TA for your project supervisor.)

In addition, we indicate that we are fully aware of the rules and consequences of plagiarism, as set forth by the Department of Computer Science and the University of British Columbia

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Project Description

The domain of our selected project is a video game data management application. More specifically, we plan to model a database for the Pokémon franchise (with slight variations to better suit CPSC 304 project requirements), highlighting some key behaviours that a player would use while interacting with the game. The purpose of this application is to monitor trainers' progress (including collected pokémon, badges earned, items collected, and gym battle records) and the development of their pokémon (such as levels and evolutions).

There are six key aspects modeled by this application:

1. Trainers and Pokémon: Trainers can collect various pokémon to form their own team. A trainer can own multiple pokémon, and the same type of Pokémon can belong to different trainers.

2. Trainer information and progress: Trainers can challenge gyms to earn a unique badge from each gym.

3. Pokémon information and evolution: Various species of pokémon exist, and each pokémon has a type. They can evolve to higher levels, and different species of Pokémon have different moves.

4. Gym Battle Records: Trainers can challenge gyms using their pokémon and earn gym badges.

5. Typing: In the game, moves, gyms, and pokémon have typing (ie. water, fire, ice, etc.). Our database will track which types belong to each move, pokémon, and gym. Players will be able to query the types to see the effectiveness of types against each other.

6. Items: Users will be able to collect items (berries and medicine) by adding them to their 'bag' (database).

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Database Specifications

Users of the database will be able to interact as a 'trainer' (player) who can catch (add) pokemon to their teams, release (delete) pokémon from their teams, and update pokemon nicknames and levels; collect (add) and use (delete) items from their 'bag'; and collect (add) gym badges. Users will be able to search and view the base attributes and evolution sets of generic (non-player) pokémon or query the pokémon on their own team (player pokémon) to view their attributes. In the database, pokémon, gyms, and moves all have types; types have strengths and weaknesses against other types. Users will be able to query two types to see what moves/pokémon are effective against other types. The administrative team will be able search and filter based on specific query criteria.

Application Platform Description

The final application will be a web application, enabling the user to enter information via a website. Our project will use the *Oracle* server to host our database through the UBC Undergraduate server. We are planning to use the *JavaScript* and *node.js* stack to implement the application so that our team members can get experience with a new language.

ER Diagram:

Note: "id" was used as the primary key for "battle" because there was no naturally occuring attribute for this entity that was suitable as a uniquely identifying trait. It would not make sense to make the date or winner of the battle a primary key.